



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/663,728	09/17/2003	Junichi Nakaho	740165-362	2220
22204	7590	11/30/2004	EXAMINER	
NIXON PEABODY, LLP 401 9TH STREET, NW SUITE 900 WASHINGTON, DC 20004-2128			AMARI, ALESSANDRO V	
			ART UNIT	PAPER NUMBER
			2872	

DATE MAILED: 11/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/663,728

Applicant(s)

NAKAHO, JUNICHI

Examiner

Alessandro V. Amari

Art Unit

2872

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 9/17/2003.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-6 are rejected under 35 U.S.C. 102(b) as being anticipated by Rauh et al US 4,889,414.

In regard to claim 1, Rauh et al discloses (see Figure) a reflecting mirror comprising a substrate (14) through which light passes; an electrode film (12) which is electrically conductive, which is substantially transparent, and which is formed at a rear surface side of the substrate, a reduction coloring film (16) formed at a surface of the electrode film at a side opposite a side where the substrate is disposed, the reduction coloring film coloring due to a reversible chemical reaction with hydrogen ions as described in column 3, lines 22-43; and an electrically conductive reflecting film (18) which is formed at a surface of the reduction coloring film at a side opposite a side where the electrode film is disposed, and which reflects light at least at a substrate side surface, and which contains a hydrogen storing metal which stores hydrogen in an adsorbed state, and which, due to application of voltage, releases hydrogen and moves the hydrogen as hydrogen ions toward the reduction coloring film, and which, due to one of canceling of the application of said voltage and applying of a voltage which is reverse of said voltage, attracts the hydrogen ions that have moved toward the

Art Unit: 2872

reduction coloring film and adsorbs and stores the hydrogen ions as hydrogen as described in column 5, lines 42-58, column 6, lines 25-39 and column 7, lines 1-42.

Regarding claim 2, Rauh et al further discloses an ion conducting film (20), which contains a dielectric and through which hydrogen ions can pass, is provided between the electrically conductive reflecting film and the reduction coloring film as described in column 6, lines 5-22.

Regarding claim 3, Rauh et al discloses that the hydrogen storing metal comprises at least one selected from the group consisting of palladium (Pd), rhodium (Rh), platinum (Pt), and alloys having functions equivalent to those of these hydrogen storing metals as described in column 5, lines 59-68 and column 6, lines 1-4.

Regarding claim 4, Rauh et al discloses that the electrode film comprises ITO as described in column 3, lines 6-19.

Regarding claim 5, Rauh et al discloses that the reduction coloring film comprises an oxide of tungsten as described in column 3, lines 44-53.

Regarding claim 6, Rauh et al discloses that the reduction coloring film is colored due to a reversible chemical reaction with the hydrogen ions as described in column 3, lines 31-53. Although the prior art does not specifically disclose that the reduction coloring film is colored to a bluish color, this is seen as an inherent teaching of the device since the materials cited in the prior art ( $\text{WO}_3$  and hydrogen ions) would have a chemical reaction such that the reduction film would be colored to a bluish color.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rauh et al US 4,889,414.

Regarding claim 7, Rauh et al discloses the claimed invention but does not teach that the dielectric comprises at least one selected from the group consisting of tantalum oxide, silicon oxide and magnesium fluoride. It would have been obvious to one having ordinary skill in the art at the time the invention was made to select one of the materials claimed above for the dielectric, since it has been held to be within the ordinary skill of a worker in the art to select a known material on the basis of its suitability for the intended use. One would have been motivated to select one selected from the group consisting of tantalum oxide, silicon oxide and magnesium fluoride for the purpose of providing a dielectric that has superior insulating properties to prevent device from short circuiting. *Sinclair & Carroll Co. v. Interchemical Corp.*, 325 U.S. 327, 65 USPQ 297 (1945)

5. Claims 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rauh et al US 4,889,414 in view of Ohno et al US 5,469,296.

Regarding claims 8 and 9, Rauh et al teaches the invention as set forth above but does not further teach in regard to claim 8, a control means, wherein the electrically

conductive reflecting film and the electrode film are connected to a power source via the control means or regarding claim 9, a light sensor.

Regarding claim 8, Ohno et al teaches (see Figure 1) a control means (10, 11, 12), wherein the electrically conductive reflecting film and the electrode film are connected to a power source via the control means as described in column 5, lines 10-42.

Regarding claim 9, Ohno et al teaches (see Figure 1) a light sensor (8, 9).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize the control means as taught by Ohno et al in the device of Rauh et al in order to provide for more precise control of the reflectivity of the mirror.

6. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rauh et al US 4,889,414 in view of Official Notice.

Regarding claim 10, Rauh et al teaches the invention as set forth above but does not teach a rearview mirror comprising the reflecting mirror. Official Notice is taken that it is notoriously old and well known in the mirror art to utilize electrochromic mirrors in automobiles as rearview mirrors. It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize the electrochromic mirror of Rauh et al in a rearview mirror in order to provide for a light modulating mirror which reduces glare.

**Conclusion**


7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Macher et al US 6,234,636, Shabrang et al US 5,124,080 and Baucke et al US 4,465,339 teach electrochromic layer mirrors.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alessandro V. Amari whose telephone number is (571) 272-2306. The examiner can normally be reached on Monday-Friday 8:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Drew Dunn can be reached on (571) 272-2312. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ava *ava*  
24 November 2004

  
MARK A. ROBINSON  
PRIMARY EXAMINER